Check List 9(5): 1067–1069, 2013
© 2013 Check List and Authors
ISSN 1809-127X (available at *www.checklist.org.br*)

Check List
Journal of species lists and distribution

NOTES ON GEOGRAPHIC DISTRIBUTION

Liolaemus stolzmanni (Steindachner, 1891) (Squamata: Liolaemidae): Distribution update

Margarita Ruiz De Gamboa Astroza [1*] and Marcos Ferrú González [2]

1 Programa de Doctorado en Sistemática y Biodiversidad, Departamento de Zoología, Universidad de Concepción; Centro de Muestreo y Análisis Biológico; Centro Social y Cultural Ambiental Ina Panqara, Valle Central 3240, 1100000 Iquique, Chile.
2 Programa de Magíster en Ciencias Mención Zoología, Departamento de Zoología, Universidad de Concepción; Centro de Muestreo y Análisis Biológico; Centro Social y Cultural Ambiental Ina Panqara, Valle Central 3240, 1100000 Iquique, Chile.
* Corresponding author. E-mail: *mruizdg@gmail.com*

ABSTRACT: *Liolaemus stolzmanni* (Steindachner, 1891), formerly recognized as *Phrynosaura reichei*, is endemic of the Atacama Desert of northern Chile. The distribution of this species has been historically documented from the Tacna Department in Peru to the Atacama Region in Chile; however, new species have been described in some of these sites, and *L. stolzmanni* does not exist in those localities. An updated distribution map and new specific locations for *L. stolzmanni* are given based on new observations and/or collections in Tarapacá Region.

Liolaemus stolzmanni (Steindachner, 1861) has been difficult to study because its nomenclature has not been clear due to an historical confusion that has recently been clarified by Langstroth (2011) that synonymy *L. reichei* (Werner, 1907) in to this species. Additionally, the nomenclature was complicated by a limited availability of specimens in collections (Donoso-Barros 1969; Nuñez *et al.* 1997) and a small and contradictory list of localities. Steindachner's types had the vague locality of "Hoch Peru", which led to considerable misunderstanding. Werner (1907) described *Phrynosaura reichei* from the Tarapacá Region, without a specific locality. Later Donoso-Barros (1969; 1970) reported that the type locality is the "Oasis de Pica", without justification. This species was considered endangered for of the infrequency of observations (Donoso-Barros 1958), also quite rare and the number of known specimens are very low (Donoso-Barros 1969; Núñez *et al.* 1997). Donoso-Barros (1969) indicated that the decrease in Tamarugo forest would have affected this species; however, there are no published localities of this species from this ecosystem, and on several trips to the Pampa del Tamarugal the authors has not found any *Liolaemus*. Mann (1964) identified this lizard to be a member of the "climax desert" community in a fog ecosystem dominated by *Tillandsia* bromeliads. Pinto (2005) considered this species as part of the fauna associated with northern Chile tillandsiales without giving specific locations. Cereceda *et al.* (1999) did not record it in the Cerro Guatalaya tillandsial, while Guzman *et al.* (2007) found it at Cerro Minas Viejas, in front of Guatalaya (2.5 km distance).This species has been reported from the Tacna Deparment of Southern Peru to the Atacama Region in Chile (Werner 1907; Donoso-Barros 1958; 1969; Núñez *et al.* 1997), however, some of the localities cited previously for *L. stolzmanni* are for populations that were later described as new species. The inland population of Arica (Poconchile) was described as *L. poconchilensis* Valladares 2004 and Langstroth (2011) confirmed that specimens of Tacna correspond to the same. The *Liolaemus* species of the phrynosauroid morphology known presently from localities previously cited for *L. stolzmanni* in the Antofagasta Region are *L. audituvelatus* (Núñez and Yáñez, 1983) from the Salar de Atacama, *L. torresi* (Núñez, Navarro, Garín, Pincheira-Donoso and Meriggio, 2003) from the environs of Calama (Núñez *et al.* 2003) and *L. manueli* (Núñez, Navarro, Garín, Pincheira-Donoso and Meriggio, 2003) from the Atacama Region (Núñez *et al.* 2003; Valladares-Faúndez 2011).

Langstroth (2011) determined the type locality to be "Deserts of Iquique, Tarapacá Region, Chile", without further specifications. In this study we provide specific localities in the vicinity of Iquique (Herpetology Image Collections at Smithsonian Institution National Museum of Natural History USNM Herp Image 2750–2755), near tillandsiales.

The specie has not been found by the author in the Quebrada de Tarapacá, Guatacondo, or the Oasis de Pica, leaving these localities as doubtful because is necessary the confirmation of the presence of this species in those places. As shown on the map (Figure 1), confirmed localities here for *L. stolzmanni* are Cerro Minas Viejas (Guzmán *et al.* 2007; Figure 2A), Cerro Guatalaya, Alto de Punta Gruesa (Figure 2B), Alto Patache (Langstroth 2011), Alto Guanillo (Núñez *et al.* 1997) and Alto Chipana (Figure 2C), while Hornitos is reported previously (Núñez *et al.* 1997). These localities correspond to floral formations (Luebbert and Pliscoff 2006) denominated "Desierto absoluto" from Iquique, specifically in the district of Alto Hospicio, and "Matorral desértico", leaving most of the localities outside of these floral formations as unconfirmed. *L. stolzmanni* has been found in many tillandsiales (Figure 3A) and close to fog oases (Figure 3B) of the Tarapacá Region, therefore these ecosystems are good places to search, collect and study.

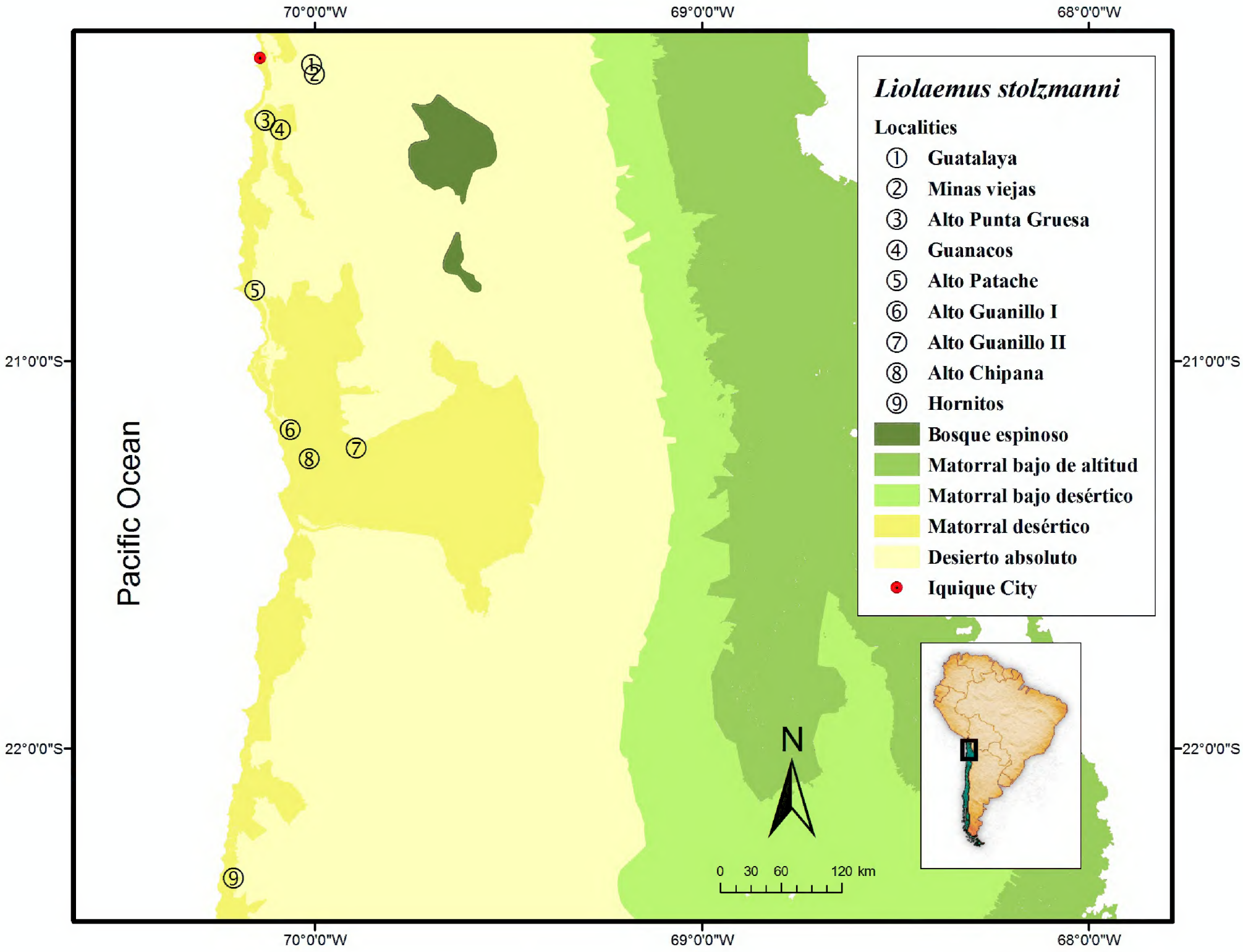

FIGURE 1. Geographic distribution map of *Liolaemus stolzmanni*. New localities are Cerro Guatalaya (954 m), Alto de Punta Gruesa (1018 m), Alto Guanillo (800 – 815 m) and Alto Chipana (863 m).

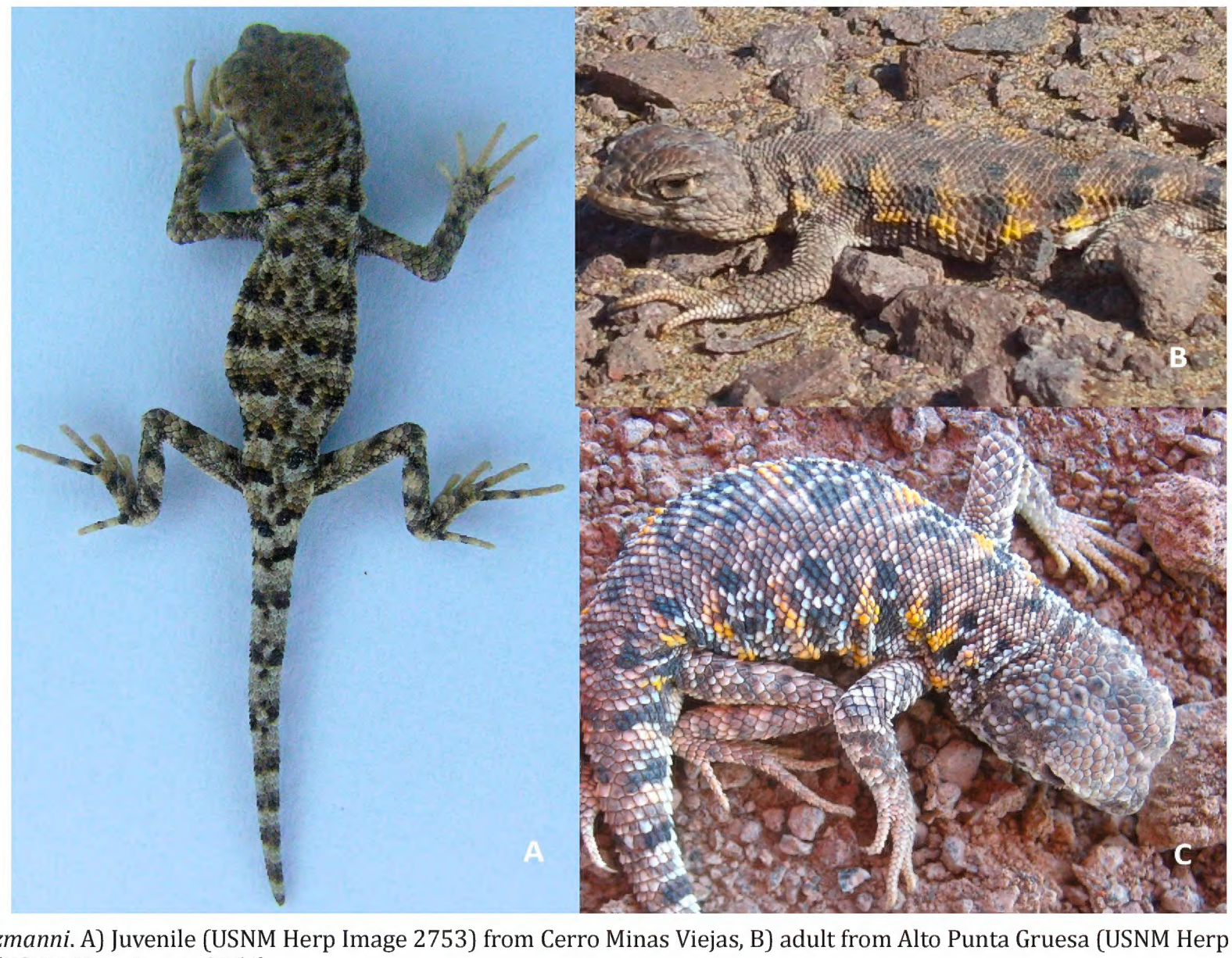

FIGURE 2. *L. stolzmanni*. A) Juvenile (USNM Herp Image 2753) from Cerro Minas Viejas, B) adult from Alto Punta Gruesa (USNM Herp Image 2754) and C) Alto Chipana (USNM Herp Image 2751).

Figure 3. A) Minas Viejas tillandsial and B) Alto Punta Gruesa Oases.

Acknowledgments: The first author thanks Jonathan Guzman and Guillermo Guzman for their help, support and encouragement.

Literature Cited

Cereceda, P., H. Larraín, P. Lázaro, P. Osses, R. Schemenauer and L. Fuentes. 1999. Campos de tillandsias y niebla en el desierto de Tarapacá. *Revista de Geografía Norte Grande* 26: 3-13.

Donoso-Barros, R. 1958. *Phrynosaura reichei* Werner 1907, Una especie en extinción? *Investigaciones Zoológicas Chilenas* 4: 220-222.

Donoso-Barros, R. 1966. *Reptiles de Chile*. Santiago de Chile: Ediciones de la Universidad de Chile. Cxliv + 458 p.

Donoso-Barros, R. 1969. Observaciones in vivo sobre *Phrynosaura reichei* Werner (Sauria-Iguanidae). *Boletín de la Sociedad de Biología de Concepción* 41: 85-87.

Donoso-Barros, R. 1970. Catálogo herpetológico chileno. *Boletín del Museo Nacional Historia Natural, Chile* 31: 49-124.

Donoso-Barros, R. 1972. Contribución al conocimiento del género *Ctenoblepharis* Tschudi y *Phrynosaura* Werner (Sauria, Iguanidae). *Boletín de la Sociedad de Biología de Concepción* 44: 129-134.

Guzmán, J., M. Ferrú, M. Ruiz de Gamboa and W. Sielfeld. (2007). Artrópodos y vertebrados de un Tillandsial al interior de Iquique, norte de Chile, con un listado de taxa previamente conocidos. *Boletín Sociedad de Biología de Concepción* 78: 23-34.

Langstroth, R.P. 2011. On the species identities of a complex *Liolaemus* fauna from the Altiplano and Atacama Desert: insights on *Liolaemus stolzmanni, L. reichei, L. jamesi pachecoi,* and *L. poconchilensis* (Squamata: Liolaemidae). *Zootaxa* 2809: 20-32.

Luebert, F. and P. Pliscoff. 2006. Sinopsis bioclimática y vegetacional de Chile. *Editorial Universitaria, Santiago.*

Mann, G. 1960. Regiones biogeográficas de Chile. *Investigaciones Zoológicas Chilenas* 6: 15-49.

Núñez, H. and F. Jaksic. 1992. Lista comentada de los reptiles terrestres de Chile continental. *Boletín del Museo Nacional de Historia Natural, Chile* 43: 63-91.

Núñez, H., J. Navarro., J. Sufán and J. Galaz. 1997. Distribución geográfica de *Phrynosaura* (Reptilia, Tropiduridae). *Noticiario Mensual del Museo Nacional de Historia Natural, Chile* 334: 11-14.

Núñez, H., J. Navarro, C. Garin., D. Pincheira-Donoso and V. Meriggio. 2003. *Phrynosaura manueli* y *Phrynosaura torresi,* nuevas especies de lagartijas para el Norte de Chile (Squamata: Sauria). *Boletín del Museo Nacional de Historia Natural, Chile* 52: 67-88.

Núñez, H. and Yáñez, J. 1983. *Ctenoblepharis adituvelatus* new species, a lizard from northern Chile (Reptilia: Iguanidae). *Copeia* 1983: 484-487.

Pinto, R. 2005. *Tillandsia del Norte de Chile y del extremo Sur de Perú.* Iquique: Editorial FlorAtacama. 135 p.

Pinto, R., Barria. I. and Marquet. P. 2006. Geographical distribution of *Tillandsia* lomas in the Atacama Desert, Northern Chile. *Journal of Arid Environments* 65: 543-552.

Steindachner, F. 1891 Über einige neue und seltene Reptilien und Amphibien-Arten. *Sitzungsberichte Akademie der Wissenschaften in Wien* 100: 291–316.

Valladares, J.P. 2004. Nueva especie de lagarto del género *Liolaemus* (Reptilia: Liolaemidae) del norte de Chile, previamente confundido con *Liolaemus (Phrynosaura) reichei*. *Cuadernos Herpetológicos* 18: 41-51.

Valladares-Faúndez, P. 2011. Análisis, síntesis y evaluación de la literatura de lagartos de la Región de Atacama, Chile. *Gayana* 75: 81-98.

Werner, F. 1907. *In* O. Bürger (ed.). Estudios sobre reptiles chilenos. *Anales Universidad de Chile* 121: 147-155.

Received: August 2011
Accepted: September 2013
Published online: October 2013
Editorial responsibility: Cameron Siler